

"APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R000518420016-4

L 50967-65

100-11428

Step 1 H<sub>2</sub> the process is as follows:

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**CIA-RDP86-00513R000518420016-4**

strength. The mobility was measured in films from 320 to 2000 Å. The wall displacement velocity was 0.1 cm.

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2000 100-1428

This corresponds to the transition from walls with curved edges to block walls.

TRANSMITTED: 00

ENCL: 00

SUB CODE: EM, SC

REF ID: S 000

OTHER: 005

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ACCESSION NR: AP5011433

UR/0048/65/029/004/0571/0575

© 1965 by SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 4, 1965. 571-575

TOPIC TAGS: ferromagnetic thin film, domain structure, domain wall, magnetic domain, permalloy

ABSTRACT: Magnetization reversal of thin Ni-Fe films by wall displacement begins at a certain critical field, the values of which, when plotted in  $H_g$  (field component in the easy direction) versus  $H_h$  (field component in the hard direction) coordinates, yield a curve that may be called the critical curve for irreversible wall displacement processes. However, if an alternating field is applied in the hard direction, there is observed a slow reversal process in field weaker than  $H_{crit}$ , i.e., creep of the domain walls. There have been some earlier studies of

Horit, i.e., creep of the domain walls. There have been some earlier studies of this creep process and various hypotheses have been advanced to explain the phenomenon. The present work was concerned with clarification of the regularities in-

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2

volved in the creep process in the specific case of 78 NiA Permalloy films prepared by thermal evaporation. Films with thicknesses in the range from 300 to 3000 Å were studied in order to bring to light the influence of the wall energy on the creep process. The experimental procedure consisted in recording, with the aid of a photo-optical effect, the variation of the wall creep rate with magnitude of the static reversing field applied in the easy direction, with the alternating field in the hard direction as the additional parameter. For comparison there were recorded the static curves and curves characterizing the starting field for the onset of uniaxial. The results are presented in graphic form. On the basis of the field dependence of the creep rate the investigated films can be divided into two classes: class I: thin (under 900 Å) and thick (1500 Å and over) films; class II: films of intermediate thickness. Class I films are characterized by a linear increase of the creep rate with increase of  $H_a$  in the intermediate range. The increase is not monotonic, but occurs in discrete steps. The various hypotheses advanced to explain this are discussed. The mechanism in the intermediate thickness films are also associated with a second order transition. Whether the mechanism which is effective in the thin films is the same in the thick ones is still an open question. The last part has:

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~~NSC operator in the thick case 26755 an open question. Orig. art. 5857~~

~~figures.~~

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CIA-RDP86-00513R000518420016-4"

TELESNIN, R.V.; IL'ICHEVA, Ye.N.; SARAYEVA, I.M.

Anisotropic dispersion in normal uniaxial films. Fiz.met. i  
metalloved. 18 no.5:691-696 N '64.

(MIRA 18:4)

1. Moskovskiy gosudarstvennyy universitet im. Lomonosova.

EAT(1)/EAT(m)/EWP(1)/ERA(d)/T/EWP(+)EFC(h)-2/EWP(z)/EWP(b) Pg-4/

44W/JD

AP5007776

12/21/3/0354/0359

46

45

6

AUTHOR: Li'licheva, Ye. N.

Investigation of anisotropic dispersion in permalloy films by the magneto-optic method

SOURCE: Fizika metallov i metallovedeniye, v. 19, no. 1, 1965, 354-359

TOPIC TAGS: anisotropy, magnetooptics, permalloy thin film

A magnetooptic method is proposed for measuring local values of the angle  $H_1$  and the angular declination of the preferred axes of magnetization on a film with an area of  $0.25-1.0 \text{ mm}^2$ . The method is based on measurement of threshold fields of irreversible processes in the rotation of magnetization vectors during magnetic reversal in two directions, both of which are near the axis most resistant to magnetization, symmetric relative to this axis and forming an angle with the axis, somewhat greater than the angle of dispersion  $B_{90}$ . The study is limited to films of 79Ni81 composition sprayed on a hot substrate with the stream of metallic vapor impinging at small angles. These films have a relative

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CIA-RDP86-00513R000518420016-4"

IL'ICHEVA, Ye.N.; KOLOTOV, I.S.

Interrupted processes of pulsed magnetic reversal. Izv. AN SSSR,  
Ser. fiz. 29 no.4:552-554 Ap '65. (MIRA 18:5)

TELESNIN, R.V.; IL'ICHEVA, Ye.N.; KANAVINA, N.G.; VAN TSZIN'-FEN  
[Wang Chin-feng]

Creeping of boundaries in Permalloy films. Izv. AN SSSR. Ser. fiz.  
29 no.4:571-575 Ap '65. (MIRA 18:5)

L15421-CG EMP(a)/EMP(m)/EWA(d)/EWA(t)/EMP(z)/EMP(b) MJW/JD  
ACC NRT APG04480

UR/0048/66/030/001/0099/0102

60  
59

AUTHOR: Il'icheva, Ye.N.; Kanavina, N.G.; Shishkov, A.G.

ORG: Physics Department, Moscow State University im. M.V. Lomonosov (Fizicheskiy  
fakul'tet Moskovskogo gosudarstvennogo universiteta)

TITLE: Critical curves of thin Permalloy films <sup>1,14,55</sup> Transactions of the Second All-Union  
Symposium on the Physics of Thin Ferromagnetic Films held at Irkutsk 10 July to 15  
July, 1964/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 1, 1966, 99-102

TOPIC TAGS: ferromagnetic film, magnetic thin film, permalloy, Kerr effect, Faraday  
effect, magnetic coercive force, magnetic domain boundary, magnetization

ABSTRACT: By a critical curve is understood a curve giving the strength of the  
magnetizing field at which some feature of the switching process occurs as a function  
of the angle between the magnetizing field and the easy axis, plotted in polar coordi-  
nates or, what is the same thing, with the longitudinal (parallel to the easy axis)  
and transverse components of the magnetizing field as rectangular Cartesian coordinates.  
Critical curves for the nucleation field, for the field at which domain wall motion  
begins, and for the coercive force of 79NMA permalloy films of different thicknesses  
were obtained with the aid of the Kerr and Faraday effects, using techniques that have  
been described elsewhere by the authors (Fiz. metallov i metallovedeniye, 20, No. 1

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L 15421-66  
ACC NR: AP604480

(1966)) and by the authors and R.V.Telesnin, O.S.Kolotov, and T.N.Nikitina (Izv. AN SSSR. Ser. fiz., 28, 572 (1964)). The nucleation fields were measured with films that had been magnetized to saturation along the easy axis; the fields for onset of domain wall motion were measured with demagnetized films. These curves are discussed at some length. For thick films the critical curves for onset of domain wall motion agreed with the formula of S.Middelhoek (J.Appl.Phys., 34, 1054 (1964)) for Neel walls; for thin films with a large angle between the magnetizing field and the easy axis the corresponding curves agreed approximately with Middelhoek's formula for Bloch walls. From a comparison of all the curves it is concluded that the coercive force depends on the ratio of the nucleation field to the field for onset of domain wall motion, and that the behavior of the critical curves for nucleation and for onset of domain wall motion depends on the type of domain walls in a film of given thickness. Orig. art. has: 2 formulas and 2 figures.

SUB CODE: 90

SUBM DATE: 00

ORIG REF: 005

OTH REF: 003

TS  
Card 2/2

L-154-U-006 EWT(1)/EWP(a)/EWT(m)/T/EWP(t)/EWP(b) LIP(c) JD/GG  
 ACC NR: A16004481 UR/0048/86/030/001/0103/0107,5

52

UR/0048/86/030/001/0103/0107,5

AUTHOR: Telesnin, R.V.; Il'icheva, Ye.N.; Kolotov, I.S.

ORG: Physics Department, Moscow State University im. M.V. Lomonosov (Fizicheskiy fakultet Moskovskogo gosudarstvennogo universiteta)

TITLE: Investigation of pulse switching processes in thin films by a magneto-optical technique [Transactions of the Second All-Union Symposium on the Physics of Thin Ferromagnetic films held at Irkutsk 10 July to 15 July, 1964]

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 1, 1966, 103-107

TOPIC TAGS: ferromagnetic film, magnetic thin film, Kerr effect, magnetic domain structure, magnetization, pulsed magnetic field.

ABSTRACT: The switching process in two 1990 Å films of undisclosed composition and having anisotropy fields of 3.9 and 3.5 Oe was investigated by observing with the aid of the Kerr effect the domain structures left after partial switching with pulses of duration from 20 to 800 nanosec and amplitude up to 23 Oe. The film was mounted at the center of a cube of Helmholtz coils and was oriented with its easy axis in a specified direction by observing the behavior of the magnetization when a strong transverse field was switched off, or by noting the absence of a transverse hysteresis loop. The magnetic field of the switching pulse could be directed at a given angle to the easy axis to within a fraction of a degree. The switching time is defined as the duration of the pulse that leaves the film 90% switched. The switching time along

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L 15420-66

ACC NR: AP6004481

the easy axis in the presence of transverse fields up to 0.4 Oe was compared as a function of the switching field with analogous switching times measured by conventional techniques by O.C.Kolotov and V.A.Pogozhev (Izv. AN SSSR. Ser. fiz., 29, No. 5, 1 (1965)). The switching times measured with the present technique were some 20% longer than the conventionally measured switching times. The switching coefficient was 0.38 Oe  $\mu$  sec and the threshold field obtained by extrapolation of the linear portion of the plot of inverse switching time against switching field was 5 Oe. The inverse switching time versus switching field curves for small inclinations of the switching field to the easy axis were straight lines when the switching field exceeded twice the anisotropy field and were curved in the region of lower switching fields. There was no marked difference between the domain structures left by low and high switching fields. When the inclination of the switching field to the easy axis exceeded the dispersion angle the switching coefficient dropped rapidly to 0.05-0.03 Oe  $\mu$  sec and the switching times became so short that the domain structures in intermediate stages could be observed only with low switching fields. In a film switched at  $80^\circ$  to the easy axis there were observed short narrow domains extended along the easy axis, which were grouped into bands that were inclined at approximately  $30^\circ$  to the easy axis. This inclination corresponds to that of the band domains observed by S.Middelhoek (I.B.M. J. Res. and Develop., 6, 394 (1962)) in quasistatic partial magnetization rotation. Curves of constant switching time were constructed. These curves differed considerably from astroids, but their approximate shape could be derived from an astroid by taking into

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ACC NR: AP6004481

account the anisotropy dispersion. The authors thank O.S.Kolotov and V.A.Pogozhev for assistance in comparing the two methods for determining the switching time. Orig. art. has: 4 figures. 2

SUB CODE: 20

SUBM DATE: 00

ORIG. REF: 003

OTH. REF: 001

TS  
Card 3/3

AUTHORS: Shorygin, P. P., Il'icheva, Z. F. SOV/48-22-9-12/40

TITLE: On the Dependence of the Spectra of Aromatic Nitro Compounds on the Rotation Angle of the Nitro Group About the Bond C-N (O zavisimosti spektrov aromaticheskikh nitrosoyedineniy ot ugla poverota nitrogruppy vokrug svyazi C-N)

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1958, Vol 22, Nr 9, pp 1058 - 1062 (USSR)

ABSTRACT: Quantitative relations between the distinctive features of conjugation and the angle  $\theta$  are only little investigated. In spite of this a knowledge of these relations is very important for the investigation of the nature of the interaction of the atoms in complicated molecules. Different interactions must depend on the angle  $\theta$  to a different degree. The authors investigated the ultraviolet absorption spectra, the spectra of combination dispersion, and the dipole moments of the ortho-derivatives of nitro benzene including such of the type

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with various substituents X. In the

On the Dependence of the Spectra of Aromatic Nitro Compounds on the Rotation Angle of the Nitro Group About the Bond C-N SOV/48-22-9-12/40

case of a fairly exact estimation of the correction factors, by which various factors influencing  $\Theta$  are taken account of, the data listed in the table must be regarded to be very approximative. If the  $\text{NH}_2$ -group (or a similar one) is introduced into the para-position of the nitro benzene molecule the difficulties met in the interpretation of the absorption spectra are reduced. These difficulties partly depend on the immediate action of the ortho-substituents X upon the benzene ring and upon the absorption spectrum. If the dependence of  $\lambda$  and of the energy of the molecule on the angle  $\Theta$  is known for the normal state it is possible to estimate the  $\Theta$ -dependence of the energy of an excited molecule. As  $\lambda$  depends on this angle to quite a low extent the double bond C-N in the excited molecule hardly seems to be strong. The interpretation of the dipole moments is rendered even more difficult by the absence of exact data on the angles C-C-Hal and on other angles. With increasing volume of the substituent X the line intensity of the nitro group in the spectrum of combination dispersion

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On the Dependence of the Spectra of Aromatic Nitro SOV/48-22-9-12/40  
Compounds on the Rotation Angle of the Nitro Group About the Bond C-N

decreases rapidly and finally approaches those values which are characteristic for the molecules without conjunction. The investigated parameters can be applied only with certain restrictions. Nevertheless it can be found that the introduction of two Cl-atoms into ortho positions (at an angle  $\theta$  of about  $60-70^\circ$ ) almost completely removes the observed conjunction characteristics. The information gained shows that the effect of induction has no essential influence on the properties of the nitro compounds. As the nitro group belongs to the most polar ones an even less importance of this effect may be expected in other types of compounds. There are 3 figures, 1 table, and 3 references, 3 of which are Soviet.

ASSOCIATION: Fiziko-khimicheskiy institut im.L. Ya. Karpova (Physico-chemical Institute imeni L. Ya. Karpov)

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09586

15.8104

S/190/61/003/002/004/012  
B130/B202

AUTHORS: Slovokhotova, N. A., Il'icheva, Z. F., Kargin, V. A.

TITLE: Effect of fast electrons on the structure of polystyrene

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 2, 1961 1961-197

TEXT: By means of spectroscopic studies the authors attempted to explain the character of the structural changes in polystyrene on irradiation with fast electrons. The polystyrene films were irradiated in the vacuum ( $10^{-4}$  mm Hg) at room temperature in a 200 kv electron accelerator tube. The electron spectra and the infrared spectra were taken by means of an  $\text{MC}\Phi$ -4 (SF-4) spectrometer and an H-800 (N-800) spectrophotometer, respectively. The authors studied specimens of amorphous polystyrene (I) with a molecular weight of 600,000 and 1,300,000, and isotactic crystalline polystyrene (II). To remove the monomeric and low-molecular fractions, polystyrene was precipitated several times from a toluene solution by means of methyl alcohol. For the complete removal of the solvent the films were dried in high vacuum. The infrared spectrum of non-irradiated (II) essentially differs from that of non-irradiated (I). After the irradiation of (II) changes are observed in

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Effect of fast electrons ...

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B130/B202

the spectrum which indicate an amorphization of the crystalline polystyrene. Instead of the doublet in the range  $1050-1083\text{ cm}^{-1}$  a band appears at  $1070\text{ cm}^{-1}$ , the maximum at  $917\text{ cm}^{-1}$  is shifted to  $906\text{ cm}^{-1}$ , the maximum at  $562\text{ cm}^{-1}$  is shifted towards lower frequencies; besides, the intensity is reduced. Amorphization of isotactic polystyrene on irradiation  $\text{X}$  definitely appears at the point where the  $917\text{ cm}^{-1}$  band is shifted. On irradiation of polystyrene with doses higher than 2500 Mrad the contour of the spectrum strongly changes at the highly intense  $700\text{ cm}^{-1}$  band and at the weak  $840\text{ cm}^{-1}$  band. This indicates that double bonds of the type  $\text{R}_2\text{C} = \text{CHR}$  and  $\text{cis-ROH} = \text{RHC}$  are formed in the polymer. Hence, the process of cross-linking can be explained by the scheme of L. A. Wall and D. W. Brown (see below). According to this scheme the hydrogen released by the rupture of the  $\text{CH}$  bond of the main chain hydrogenates the neighboring ring of the phenyl molecule under formation of a cyclohexadiene ring with double bonds and cross-linking of the neighboring molecules. Conjugate systems with double bonds are formed in the main chain of polystyrene. Ye. I. Pokrovskiy and M. V. Vol'kenshteyn are mentioned. There are 5 figures, 1 table, and 12 references: 5 Soviet-bloc and 7 non-Soviet-bloc. The 3 references to English language publications read as follows: L. A. Wall, D. W. Brown,

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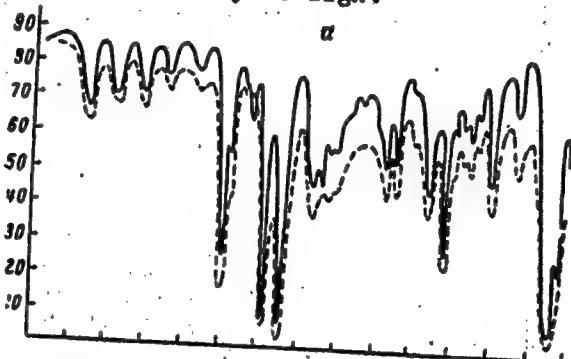
07700

Effect of fast electrons ...

S/190/61/003/002/004/012  
B130/B202J. Phys. Chem., 61, 129, 1957; C. J. Liang, S. Krimm, J. Polymer Sci., 27,  
241, 1958; H. L. McMurry, V. Thornton, Anal. Chem., 24, 318, 1959.

SUBMITTED: June 14, 1960

Legend to Fig. 1: infrared spectra a) atactic polystyrene (molecular weight 1,300,000,  $d = 45 \mu$ ); b) isotactic polystyrene,  $d = 30 \mu$ ; c) atactic polystyrene (molecular weight 600,000,  $d = 45 \mu$ ) not irradiated: solid lines, irradiated: dashed lines y) transmissivity of light

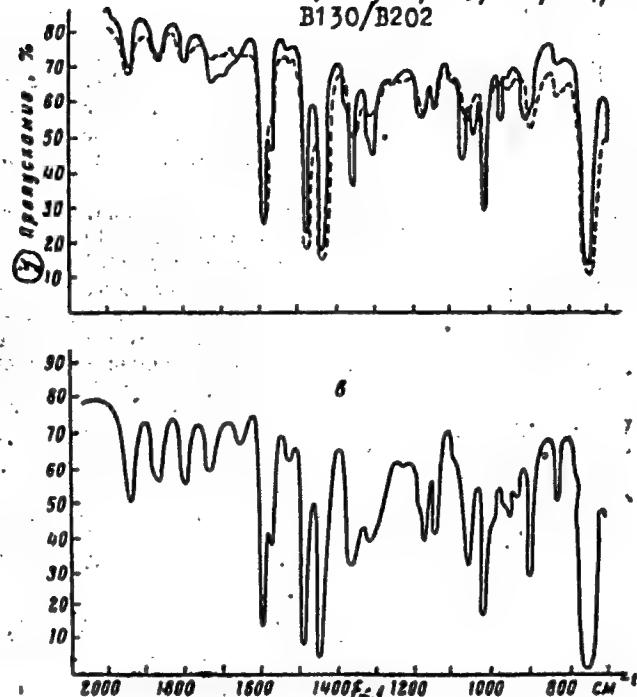


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Effect of fast electrons .

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B130/B202



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GOL'DSHTEYN, I.P.; IL'ICHEVA, Z.F.; SLOVOKHOTOVA, N.A.; GUR'YANOVA, Ye.N.;  
KOCHESHKOV, K.A.

Spectroscopic investigation of complexes formed by thiophane  
and thiopene with tin tetrachloride. Dokl.AN SSSR 144 no.4:  
788-791 Je '62. (MIRA 15:5)

1. Fiziko-khimicheskiy institut im. L.Ya.Karpova. 2. Chlen-  
korrespondent AN SSSR (for Kocheshkov).  
(Thiophene—Spectra) (Tin chlorides)

2  
S/190/63/005/004/015/020  
B101/B220

AUTHORS: Slovokhotova, N. A., Koritskiy, A. T., Kargin, V. A.,  
Buben, N. Ya., Bibikov, V. V., Il'ichaya, Z. F.,  
Rudnaya, G. V.

TITLE: Effect of fast electrons on polyethylene at low temperatures.  
I. Double bonds in irradiated polyethylene

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 5, no. 4, 1963, 568-574

TEXT: High-density polyethylene (PE), low-density PE, and PE obtained by radiation polymerization, were irradiated with 1.6 Mev electrons in liquid or gaseous N<sub>2</sub>. The dose was varied from 25 to 300 Mrad. The IR spectra were studied from -196 to +50°C. The intensity of the 966 cm<sup>-1</sup> band proved to be independent of the nature of the PE and of the temperature. Hence it is concluded that the trans-vinylene bonds form in the primary irradiation act. On the contrary, the 909 cm<sup>-1</sup> band characteristic of vinyl bonds was with 200 Mrad and at -196°C six times as large and at -50°C only 2.5 times as large as in nonirradiated PE. With doses below 25 Mrad the initial concentration of vinyl groups decreased, whereas with

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Effect of fast electrons on....

higher doses it increased. Thus irradiation induces the formation as well as the disappearance of vinyl double bonds, the disappearance being favored by higher temperatures. From the experimental fact that the  $N_{tv}/N_v$  ratio of the trans-vinylene to the vinyl groups is 18 for PE obtained by radiation polymerization, but 14 with high-density PE, it is assumed that the most probable process is a migration of energy and the formation of vinyl groups by the H atoms splitting off from two neighboring C atoms at the end of the molecular chain. There are 3 figures and 1 table.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physico-chemical Institute imeni L. Ya. Karpov)

SUBMITTED: October 11, 1961

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S/190/63/005/004/016/020  
B101/B220

AUTHORS: Slovokhotova, N. A., Koritskiy, A. T., Kargin, V. A.,  
Buben, N. Ya., Il'icheva, Z. F.

TITLE: Effect of fast electrons on polyethylene at low temperatures.  
II. Conjugated double bonds and allyl radicals in irradiated  
polyethylene

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 5, no. 4, 1963, 575-580

TEXT: The IR and epr spectra of irradiated polyethylene were studied.  
Results: (1) Irradiation with more than 50 Mrad induces the formation of  
conjugated double bonds which are characterized by the  $985 \text{ cm}^{-1}$  band.  
(2) At low temperatures allyl groups form which are characterized by the  
 $944 \text{ cm}^{-1}$  band detected also in the epr spectrum. (3) When benzene or  
toluene were admixed to the polyethylene the yield in allyl radicals and  
conjugated bonds was reduced. A protective action of the benzene ring  
owing to charge migration is assumed. There are 4 figures.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physico-  
chemical Institute imeni L. Ya. Karpov)

L 41766-65 EPF(c)/EPF(n)-2/EWG(j)/EWA(h)/EWP(j)/EWT(m)/T/EWA(l) Pe-4/Pr-4/Pu-4/  
Peb GG/RM

ACCESSION NR: AP4032561

*S/*  
*+7* s/0190/64/006/004/0608/0614  
*E*

AUTHORS: Slovokhotova, N. A.; Il'icheva, Z. F.; Vasil'yev, I. A.; Kargin, V. A.

TITLE: Effect of ionizing radiation on the structure of polypropylene

SOURCE: Vysokomolek. soyedin., v. 6, no. 4, 1964, 608-614

TOPIC TAGS: polypropylene, irradiation, polymer, IR absorption, spectrophotometer / N 800 spectrophotometer

ABSTRACT: <sup>14</sup> Films of isotactic and commercial amorphous polypropylene were prepared by hot pressing. They were irradiated in a vacuum ( $10^{-4}$  mm) at 25 and  $-196^{\circ}\text{C}$  by fast electrons from an acceleration tube (voltage of accelerating field = 200 kv) and by <sup>60</sup>Co gamma rays. Infrared spectra of the initial and irradiated specimens were recorded on an N-800 spectrophotometer. Absorption bands at 890 and  $910\text{ cm}^{-1}$  for irradiated specimens correspond to the double bands  $\begin{array}{c} \text{R} \\ | \\ \text{R}-\text{C}=\text{CH}_2 \end{array}$  and  $\begin{array}{c} \text{R} \\ | \\ \text{R}-\text{C}=\text{CHR} \end{array}$  bonds in the  $\text{RCH}=\text{CH}_2$ . These bands are due to degradation of polypropylene through radiation. Bands in the 815-855 region and at  $1665\text{ cm}^{-1}$  correspond to  $\begin{array}{c} \text{R} \\ | \\ \text{R}-\text{C}=\text{CHR} \end{array}$  bonds in the

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irradiated polypropylene. The degradation of polypropylene during irradiation involves simultaneous rupture of the C-C and C-H bonds, with the formation of molecules containing propyl and vinylidene. The number of vinylidene double bonds observed in the spectrum depends markedly on the phase of the polymer and on the temperature of irradiation. The number in specimens irradiated at room temperature may be 2.5 times the number in specimens irradiated at -196°C. The number in amorphous polypropylene may be 2.7 times the number for isotactic polypropylene (other factors being the same). Electron paramagnetic resonance spectra show that heating irradiated specimens above 80°C gives rise to free polyene radicals, and this indicates that the double bond may migrate along the polymer chain. The crosslinking of two double bonds leads to the appearance of lower frequency bands in the spectrum. Crosslinking with an unpaired electron probably lowers the oscillation frequency of the double bond also. Increase in absorption in the  $1645\text{ cm}^{-1}$  region may take place by double bond absorption in the allyl radical, the oscillation frequency of which is lowered because of the crosslinking of  $\pi$ -electrons of the double bond with an unpaired electron of the radical. Orig. art. has: 2 figures, 1 table, and 2 formulas.

ASSOCIATION: Nauchno-issledovatel'skiy fiziko-khimicheskiy institut im. L. Ya. Karpova (Scientific Research Physico-chemical Institute)

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L 41766-65  
ACCESSION NR: AP4032561

SUBMITTED: 08Apr63

ENCL: 00

SUB CODE: OC

NO REF SOV: 003

OTHER: 006

CC  
Card 3/3

L 33067-66 EWT(m)/EWP(j) IJP(c) RM  
ACC NR: AP6024159

SOURCE CODE: UR/0020/65/164/003/0581/0583

AUTHOR: Il'icheva, Z. F.; Kharlamova, Ye. N.; Slovokhotova, N. A.

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X3

ORG: Physical Chemistry Institute im. L. Ya. Karpov (Fiziko-khimicheskiy institut)

TITLE: Spectroscopic investigations of a complex<sup>5</sup> of natural rubber<sup>5</sup> with titanium tetrachloride

SOURCE: AN SSSR. Doklady, v. 164, no. 3, 1965, 581-583

TOPIC TAGS: spectroscopy, natural rubber, titanium compound, cyclization, spectrophotometer, ir spectrum, chloride

ABSTRACT: It is known that under the effect of titanium tetrachloride cyclization of rubbers takes place. The present study was undertaken to elucidate the nature of the intermediate products in this process. Natural rubber (NR) was used for the investigations, treated with boiling acetone for 24 hours, and then reprecipitated with methanol from a benzene solution. For measurement of infrared spectra a NR film 0.004 cm thick was prepared from benzene solution in the center of a KBr disc. After careful drying of the film under high vacuum, several drops of  $TiCl_4$  were deposited on it. The bright-orange product then formed was covered with a second KBr disc, after which its infrared spectrum was immediately measured on a UR-10 spectrophotometer. All the operations with  $TiCl_4$  and the filling of cuvettes were carried out in a hermetic chamber in dry argon. Infrared spectra of the NR +  $TiCl_4$  system differed substantially from

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ACC NR: AP6024159

the spectra of the original rubber and pure  $TiCl_4$ . In the system, a new intense band appeared in the region of  $1530\text{ cm}^{-1}$ ; at the same time, the  $1665\text{ cm}^{-1}$  absorption band, corresponding to the valency oscillations of the  $C=C$  bond in the original NR disappeared. Evidently, a  $135\text{ cm}^{-1}$  shift of this band into the long-wave region occurred, along with an increase in its intensity.

An intense absorption band with a maximum in the  $445$  millimicron region was observed in the electronic spectrum of the system NR /  $TiCl_4$ ; a band in this region was also observed in the electronic spectrum of the  $\pi$ -complexes of diphenylethylene and its dimer with  $SnCl_4$ . These facts indicate that in the reaction of NR with  $TiCl_4$ , a  $\pi$ -complex is initially produced. Evidently, due to the formation of this complex disappearance of the  $3040\text{ cm}^{-1}$  band of the valency oscillations of the  $CH$  bond in the  $-C=CH-$  group is observed, along with a shift



in the  $840\text{ cm}^{-1}$  absorption band of the deformational oscillation of this bond in the  $820 - 810\text{ cm}^{-1}$  region. This paper was presented by Academician V. A. Kargin on 13 Mar 1965. Orig. art. has: 3 figures. [JPRS]

SUB CODE: 11,07;20 / SUBM DATE: 20Feb65. / ORIG REF: 002 / OTH REF: 005

Card 2/2 (ph)

IL'ICHEVA, Z. V.

Cand Tech Sci

Dissertation: "Investigation of the Effect of Deep Cooling on the  
Strength of a Cutting Tool."

30/6/49 30 June 49

Moscow Automotive Mechanics

SO Vecheryaya Moskva  
Sum 71

LEBEDEV, A.S.; IL'ICHEVA, Z.V., kand. tekhn. nauk

Determining optimum design of the working part of cams for lathe  
chucks. Avt. prom. 31 no.3:41-43 Mr '65. (MIRA 18:7)

1. Moskovskiy avtomobil'nyy zavod imeni Likhacheva i Moskovskiy  
avtomekhanicheskiy institut.

IL'CHEVICH, N.V. [Il'chevich, N.V.]; KOZAK, V.A.

Interrelationships between the state of coronary circulation  
and the level of general blood pressure. Fiziol. zhur. Ukr.  
6 no.4;545-552 Jl-Ag '60. (MIRA 13:7)

1. Laboratoriya fiziologii krovoobrashcheniya i dykhaniya  
Instituta fiziologii im. A.A. Bogomol'tsa AN USSR, Kiyev.  
(BLOOD PRESSURE) (CORONARY VESSELS)

ILIC-VUKOTIC, M., dr.; RUSTEMBEGOVIC, F., doc. dr.

Anticoagulant and fibrinolytic therapy. Med. arh. 18 no.5:  
39-47 S-0'64.

1. III. interna klinika Medicinskog fakulteta u Sarajevu  
(Sef: Prof. dr. I. Brkic).

COSTACHEL, O.; NASTAC, E.; ILIE, B.

Influence of vaccinia virus associated with narcosis on the evolution of the Guerin Tg epithelioma in rats. Stud. cercet. inframicrobiol., Bucur. 10 no.4:425-432 '59.

1. Comunicare prezentata la Institutul de inframicrobiologie al Academiei R.P.R., in sedinta din 30 martie 1959.  
(CARCINOMA, EPITHELIOM, experimental)  
(VACCINIA, virology)  
(NEOPLASMS, EPITHELIAL, experimental)  
(AMORARBITAL, pharmacology)

COSTACHEL, O.; NASTAC, E.; ILIE, B.

Action of the ovovaccine combined with cytostatics on the evolution of Guerin tumors. in rats. Stud. cercet. inframicrobiol., Bucur. 11 no.1:31-40 '60.

1. Comunicare prezentata la Institutul de inframicrobiologie al Academiei R.P.R. in Sesiunea stiintifica festive din 17-18 august 1959.

(NEOPLASMS, experimental)  
(VACCINES, pharmacology)  
(ANTINEOPLASTIC AGENTS, pharmacology)

COSTACHEL, O.; ILIE, Bianca

The effect of several viruses and cytostatic products on pulmonary tumors induced by intravenous injection of Ehrlich's ascites in mice. Rev. sci. med. 6 no.3/4:145-148 '61.

(LUNG NEOPLASMS experimental) (CARCINOMA experimental)  
(VIRUSES) (ANTINEOPLASTIC AGENTS pharmacology)

ILIE, Bianca; DUMITRIU, Aurora

Modification of the polarographic curves of the serum of rats with  
Guerin's carcinoma T 8 after inoculation with vaccinal virus. Stud.  
cercat. inframicrobiol. Bucur. 12 no.1:117-128 '61.  
(NEOPLASMS experimental) (VACCINIA virology)  
(BLOOD PROTEINS chemistry)

COSTACHEL, O.; ILIE, B.

The action of vaccinia and herpes viruses and of the cytostatic drugs, degranol and TEM, on several experimental pulmonary tumors. Stud. cercet. inframicrobiol. 12 no.3:317-323 '61.

1. Communicare prezentata la Institutul de inframicrobiologie al Academiei R.P.R. in sedinta din 5 Mai 1961.  
(LUNG NEOPLASMS experimental) (VACCINIA virology)  
(HERPES virology) (NITROGEN MUSTARDS pharmacology)  
(MANNITOL related cpds.) (TRIETHYLENE MELAMINE pharmacology)

COSTACHEL, O.; NASTAC, E.; ILIE, B.

Action of some viruses associated with cytostatics on the Guerin tumor T8. Studii cerc inframicrobiol 12no.4:437-440 '61.

1. Institutul de inframicrobiologie al Academiei R.P.R. 2. Membru al Comitetului de redactie si secretar stiintific de redactie "Studii si cercetari de inframicrobiologie" (for Nastac).

ILIE, Bianca

Morphological changes produced by the association of 2 proliferogenic agents in embryonated hen egg. The action of vaccinia virus and certain tumor filtrates. Stud. cercet. inframicrobiol. 12 no.4:517-523 '61.

1. Comunicare prezentata la Institutul de inframicrobiologie  
al Academiei R.P.R.  
(VACCINIA virology) (NEOPLASMS experimental)  
(FETAL MEMBRANES)

ILIE, Bianca

Experimental data on the viral etiology of Ehrlich's ascites carcinoma.  
Stud. cercet. inframicrobiol. 13 no.3:405-407 '62.

1. Comunicare prezentata la Institutul de inframicrobiologie al  
Academiei R.P.R.  
(CARCINOMA, EHRLICH TUMOR) (TUMOR VIRUSES)

ILIE, Bianca

Experimental and histopathological investigations of a mouse tumoral disease transmissible by cellular and cell-free material. Stud. cercet. inframicrobiol. 13 no.6:705-714 '62.

1. Comunicare prezentata la Institutul de inframicrobiologie al Academiei R.P.R.

(NEOPLASMS, EXPERIMENTAL) (VACCINIA VIRUS)  
(TUMOR VIRUSES)

RUMANIA

Bianca ILIE, Bucharest Oncologic Institute (Institutul Oncologic din Bucuresti.)

"A New Murine Tumor Transmissible by Cell-Free Material. Part 2. Evolution of Disease in Cytemic and Acytemic Form."

Bucharest, Studii si cercetari de inframicrobiologie, Vol 14, No 3, 1963; pp 355-361.

Abstract [English summary modified]: A new murine tumor is described, similar to Friend reticular leukemia but not identical with it; it could be transmitted by cell-free filtrate of tumors, liver, spleen, seminal vesicles or whole blood and was maintained by serial passages for 10 months. Comprehensive histopathological data. Two photographs of organ specimens, 3 photomicrographs; 1 Rumanian and 5 Western ref's.

1/1

ILIE, Bianca

Experimental research on the problem of the oncogenic action  
of vaccinia virus. Stud. cercet. inframicrobiol. 14 no.5:  
625-634 '63.

1. Comunicare prezentata la Institutul de inframicrobiologie  
al Academiei R.P.R.

(VACCINIA VIRUS) (NEOPLASM, EXPERIMENTAL)  
(CARCINOMA, EHRLICH TUMOR)  
(SARCOMA, RETICULUM CELL)  
(ADENOCARCINOMA) (LIVER NEOPLASMS)

XLII, Bianca

Tumor 62 disease. IV. Research on the action of some immune  
serums against tumor 62 ascites. Stud. cercet. inframicrobiol.  
15 no.3:279-292 '64.

ILIE, Constantin

Automation of glass melting furnaces in glass factories. Automatica  
electronica 5 no.5:211-218 S-0 '61.

ILIE, Comtache, ing.

Performance and behavior of the manual rectilinear knitting machines made in Rumania. Ind text Rum 10 no.9:376-379 S '59.

1. Intreprinderea "Textila Rosie," Orasul Stalin.

ILIE, D. Ion; GRIGORE, Mihai (Bucuresti)

Methods of mapping the depth of relief fragmentation  
with application to the part of the Danube Valley between  
Svinita and Turnu Severin. Natura Geografie 16 no.3:40-44  
My-Je '64.

JELEA, Al., dr.; VULPESCU, S., dr.; IOTA, C.Gh., dr.; ILIE, E., dr.; NUTA, M., dr.; DIACONU, Justin, dr.

Contribution to the study of the morphofunctional correlations in bronchial asthma. Med. intern. 3:281-283 Mr '62.

1. Lucrare efectuata in Clinica medicala a Institutului de medicina interna al Academiei R.P.R., a Ministerului Sanatatii si Prevoaderilor Sociale (director: acad. N. Gh. Lupu).

(ASTHMA pathology) (RESPIRATION physiology)  
(BRONCHI radiography)

RACOVEANU, Carmen; RUNCAN, V.; IOTA, C.G.; ILIE, E.; OLINESCU, R.

Respiratory changes in chronic hepatitis and post-hepatitis cirrhosis.  
Spiro-gasometric investigations. Stud. cercet. med. intern. 3 no.4:  
473-484 '62.  
(HEPATITIS) (LIVER CIRRHOSIS) (RESPIRATORY DISEASES)  
(SPIROMETRY) (BLOOD GAS ANALYSIS)

JELEA, Al.; IOTA, C.G.; RACOVEANU, Carmen; ILIE, E.; NUTA, M.

Method of spirographic diagnosis of tracheobronchial dyskinesia of  
the hypotonic type. Stud. cercet. med. intern. 3 no.5:661-668 '62.  
(TRACHEA) (BRONCHIAL DISEASES) (RESPIRATORY FUNCTION TESTS)

GALEA, Gh., conf.; ILIE, E., dr.; BONA, C., dr.

Considerations on some "enzymatic lesions" of phospholipid and glycoprotein metabolism in thesaurosis. Med. intern. 14 no.4:393-401  
Ap '62.

(LIPID METABOLISM) (PHOSPHOLIPIDS)  
(PROTEIN METABOLISM DISORDERS) (GLYCOPROTEINS)  
(METABOLIC DISEASES)

PAUN, R., dr.; MARCUS, N., dr.; ILIE, E., dr.; LAZAROVICI, M., chemist

Contribution to the relation of oxalic acid metabolism and hepatic diseases. II. Investigations of oxalemia and oxaluria in chronic hepatitis. Med. intern. 14 no.4: 455-460 Ap 1962.

1. Lucrare efectuata in Clinica I medicala, I.M.F., Bucuresti.  
(director: acad. N.Gh. Lupu).  
(OXALATES) (BLOOD) (URINE) (HEPATITIS) (URINARY CALCULI)

JELEA, Al., dr.; ILIE, E., dr.; VAISLER, A., interni; DIACONU, J.

Hypotonic tracheobronchial dyskinesia. Med. intern. 14 no. 6:755-758  
Je '62.

(TRACHEA) (BRONCHIAL DISEASES) (MOVEMENT DISORDERS)  
(RESPIRATORY INSUFFICIENCY) (PULMONARY EMPHYSEMA)  
(BRONCHOPNEUMONIA)

PAUN, R., conf.; MARCUS, N., dr.; ILIE, E., dr.; LAZAROVICI, M., chim.

Investigations of the metabolism of oxalic acid during chronic liver diseases. III. Investigations on renal clearance of oxalic acid in liver diseases. Med. intern. 14 no.12:1479-1485 D '62.

1. Clinica medicala "Colentina" (director: acad. N. Gh. Lupu)  
I.M.F., Bucuresti.  
(OXALATES) (URINE) (HEPATITIS) (URINARY CALCULI)

IOTA, C.G.; PAPAZIAN, Ripsimia; ILIE, E.; URSEA, N.; POPESCU, T.;  
RUNCAN, V.

The neurovegetative syndrome in chronic hepatitis and post-hepatitis  
cirrhosis. III. Investigations of the adaptation of the peripheral  
circulation during some tests of general reheating and cooling of  
the body. Stud. cercet. med. intern. 4 no.2:169-176 '63.  
(AUTONOMIC DYSFUNCTION) (HEPATITIS) (LIVER CIRRHOSIS)  
(BODY TEMPERATURE REGULATION) (BLOOD CIRCULATION)

JELEA, Al., dr.; BUJAR, H., dr.; IOTA, C.Gh., dr.; ILIE, E., dr.; VAISLER, Al.,  
int.

Contributions to the study of the relations between functional and  
radiological examinations, with double exposures, in bronchial asthma.  
I. Med. intern. 15 no.3:349-353 Mr '63.

1. Lucrare efectuata in Institutul de medicina interna al Academiei  
R.P.R. si M.S.P.S. (director: acad. N.Gh. Lupu).  
(ASTHMA) (THORACIC RADIOGRAPHY) (RESPIRATORY FUNCTION TESTS)

*ILIE, E.*

RUMANIA

ILIE, E., MD; BONA, C., MD; BONA, M., MD; MLADINESCU, Beatrice, MD.

Bucharest, Viata Medicala, No 7, 1 Apr 63, pp 441-446.

"The Central Role of Glutamic Acid in the Cerebral Metabolism.  
(Physiopathological considerations)."

(H)

JELEA, Al., dr.; RACOVEANU, Carmen, dr.; ILIE, E., dr.;  
SUTEANU, St., dr.; DUMITRESCU, C., farm.; GAVRILA, F., extern.

Contribution to the study of treatment with  $\alpha$  -chymotrypsin  
in bronchopulmonary diseases. Med. intern. 15 no.4:495-498  
Ap '63.

1. Lucrare efectuata in Institutul de medicina interna, al  
Acad. R.P.R. si al M.S.P.S. (director: acad. N. Gh. Lupu).  
(CHYMOTRYPSIN) (BRONCHITIS)  
(PULMONARY EMPHYSEMA) (ASTHMA)  
(BRONCHIECTASIS) (BRONCHIAL SPASM)

PAUN, R., conf.; MARCUS, N., dr.; ILIE, E., dr.; OLINESCU, R., chim.;  
PAPAGHEORGHE, Camelia, chim.; LAZAROVICI, Miriam, chim.;  
CRISTESCU, Marcela, chim.

Coproporphyrinuria in chronic hepatitis. Med. intern. 15 no.6:  
687-693 Je '63.

1. Lucrare efectuata in Institutul de medicina interna al  
Academiei R.P.R. si Ministerul Sanatatii si Prevederilor Sociale,  
Bucuresti (director: acad. N.Gh. Lupu).  
(HEPATITIS) (PORPHYRINS) (URINE)  
(KIDNEY FUNCTION TESTS)

JELEA, Al., dr.; SUTEANU, St., dr. ILIE, E., dr.; GAVRILA, F., extern.

Respiratory and digestive interrelations. Med. intern. 15 no.12:  
1515-1522 D'63.

1. Lucrare efectuata in Institutul de medicina interna al  
Acad R.P.R. si Ministerului Sanatatii si Prevederilor Sociale  
(director Acad. N.Gh. Iupu).

\*

PAPAZIAN, Ripsimia, dr.; IOTA, C.G. dr.; ILIE, E., dr.

Nervous and circulatory disorders during the evolution of chronic hepatitis and post-hepatitis cirrhosis. Their significance and current possibilities of physiological investigation. Med. intern. 16 no.1:19-26 Ja'64.

1. Lucrare efectuata in Institutul de Medicina Interna al Acad. R.P.R. si M.S.P.S. (director: Acad. N.Gh.Lupu).

\*

JELEA, Al. dr.; ILIE, Ernest, dr.; GAVRILA, F., extern.

Contribution to the study of pulmonary insufficiency due to  
tabagism. Med. intern. 16 no.2:229-234 F'64.

1. Lucrare efectuata in Clinica medicala a Spitalului "Colentina",  
I.M.F., Bucuresti.

\*

JELEA, Al., dr.; SUTEANU, St., dr. ILIE, E. dr.

Current status of pneumology. Med. intern. (Bucur.) 16 no.4:  
487-492 Ap'64.

1. Clinica medicala "Colentina" (sef de disciplina, conf. R.Paun).

BONA,C., dr.; DUMITRESCU,M. dr.; GHYKA, Gr. dr.; ILIE, E., dr.

Current data on the bio-structure and functions of the cell nucleus in normal and pathological conditions. I. Bio-structure of the nucleus. Med. intern. (Bucur.) 16 no.4:493-504 Ap'64.

1. Institutul "Dr.I. Cantacuzino" si Clinica medicala "Colentina" din Bucuresti.

\*

GRYKA, Gr., dr.; BONA, C., dr.; DUMITRESCU, M., dr.; ILIE, E., dr.

Current data on the biostructure and functions of the cell nucleus in normal and pathological conditions. II. Biosynthesis of the nuclear constituents. Med. intern. (Bucur), 16 nr. 9:1039-1049 S '64.

1. Lucrare efectuata la Institutul "Dr. I. Cantacuzino" si Clinica medicala "Colentina", Bucuresti.

DUMITRESCU, M., dr.; GHICA, Gr., dr.; BONA, C., dr.; ILIE, E. dr.

Current data on the biostructure and functions of the cell nucleus in normal and pathological conditions. III-a. The role of the nucleus in the biosynthesis of cellular constituents. Med. intern. (Bucur.) 17 no.1:35-43 Ja '65

1. Lucrare efectuata in Institutul "Dr. I. Cantacuzino" si Clinica medicala a Spitalului Colentina, Bucuresti.

DUMITRESCU, M., dr.; GHYKA, Gr., dr.; BOINA, C., dr.; ILIE, E., dr.

Current data on the biosynthesis and functions of the cell nucleus in normal and pathological conditions. IV. a. Genetic mechanism of regulation of normal and pathological protein synthesis. Med. intern. (Bucur) 17 no.2:141-148 F'65.

1. Lucrare efectuata in Institutul "Dr. I.Cantacuzino" si Clinica medicala a Spitalului "Colentina", Bucuresti.

STANESCU, S.; VIRCOL, A.; BIRTU, E.; TETEL, E.; VIRCOL, L.; MARCULESCU, I.;  
CUTE, E.; AVADANEI, A.; BURCIU, O.; CICBANU, S.; ILIE, E.; MOTEA, I.

Hydrographic basin of the Mures River; a hydrologic monograph.  
Studii hidrol 6:3-273 '63.

TECUSAN, N.; SANDRU, A.; POPESCU, M.; STEFAN, Const.; ILIE, E.; NITA, I.; COSMA, I.

Determining the fuel consumption in vacuum displacement of the  
U-650 tractor. Bul St si Tehn Tim 9 no.1:135-142 Ja-Je '64.

HTE 1.

S/169/62/000/012/032/095  
D228/D307

AUTHORS: Antonescu, V., Calinicenco, N., Nechita, O., Onu, C.,  
Rusu, Gh. Ilic, Tomozci, Ci., Tibu, M., Vescan, T.T.  
and Viscriun, I.

TITLE: Investigation of the radioactivity of some rocks  
around the mines of Rodna Veche-Valea Vinului

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 12, 1962, 46-47,  
abstract 12A378 (Studii și cercetări științ. Acad.  
RPR Fil. Iași, Fiz. și științe tehn., 12, no. 1,  
1961, 31-33 (Rum.; summaries in Rus. and Eng.))

TEXT: The authors investigated the radioactivity of chlorite-schist, andesite, and sericite-schist samples from the area of the old mines of Rodna Veche-Valea Vinului in the Rodna Massif (Rumanian People's Republic). The results of measuring the radioactivity of samples show that the ratio of the number of readings per second in the presence of 1 mm Al to the number of readings without Al varies from 0.1 to 0.30 when the activity ranges from

Card 1/2

S/169/62/000/012/032/095  
D228/D307

Investigation of the radioactivity ...

0.16 to 0.91  $\mu$ c. The analytical data for these rocks coincide  
with the data pertaining to rocks from the Baia Borca area.

[Abstracter's note: Complete translation]

Card 2/2

ILIE, I.

"Origin of the continents and oceans" by D.G. Panov. Analele geol geogr  
16 no.3:137-139 Jl-Ag '62.

ILIE, I.

"Applied geomorphology." Reviewed by I. Ilie. *Analize geol geogr*  
16 no.3:139-141 Jl-Ag '62.

ILIE, I.

"Geomorphology with elements of geology" by V.V. Piotrovskiy.  
Reviewed by I. Ilie. Analele geol geogr 16 no.3:141-144 J1-4g '62.

ILIE, Ion; POPESCU, Nicolae; GORGAN, Marcel

Our correspondents are writing to us from the cement plants.  
Constr Buc 14 no.651:1 30 Je '62.

CASLER, Gh., prof.; HELCUS, V., lector; RENER, A., lector; CONDREA, I.,  
asist.; ILIE, I., ing.; ZERELLES, W., ing., SCHMIDT, H., ing.

Influence of the geometry of the cutting part of helicoidal  
drills on the drilling dynamics of some Rumanian steels.  
Constr mas 15 no.8:562-569 Ag'63.

1. Institutul politehnic, Iasi (for Casler, Rener, Condrea).
2. Fabrica de scule, Risanov ( for Ilie, Zerelles, Schmidt).

ILIE, Ion, corespondent voluntar (Medgidia)

Successes in socialist competition. Constr Buc 15 no.724:  
1 23 N '63.

DATCU, Nicolae; MOLDOVAN, Ilie; RADU, Ion; ILIE, Ion; POPESCU, Nicolae; COVAR, O.A., economist

From letters received from voluntary newspapermen. Constr  
Buc 16 no.742:2 28 March 1964.

ILIE, Ion

An action of the whole collective. Constr Buc 16 no.  
743:1 4 April '64

ILIE, Ion; RASCA, Dumitru; CRACIUN, Ion, economist; SIRIOPOL, Telemac; BARBALATA, Stanciu; CRISAN, Bazil, ing.; CIRSTOIU, Valentin; GHINEA, Vasile, correspondent

Enthusiastic socialist competition. Constr Buc 16 no. 750:1 23 May '64.

1. The Galati Branch of the Voluntary Editorial Office of "Constructorul" (for Siriopol, Barbalata).
2. Head of the Department of Production, Regional Trust for Housing Construction, Hunedoara (for Crisan).

BERENSTEIN, I.; ILIE, Ion; BUCUR, Stelian

Rumanian newspaper correspondents on the January successes.  
Constr Buc 17 no.788;1 13 F '65.

ILIE, Ion; RADU, Ion

News from Medgidia. Constr Buc 17 no.790;3 27 F '65.

NICOLAE, M.; ILIE, Ion, correspondent

In short about innovations. Constr Buc 17 no.792:3 12  
Mr '65.

POSEA, Grigore, conf. univ. (Bucuresti); ILIE, Ion, assist, univ. (Bucuresti)

Practical importance of terraces and river valleys. Natura Geografie  
13 no. 3:33-42 My-Je '61.

ILIE, Ion. D. (Bucuresti); GRIGORE, Mihai (Bucuresti)

Forms of karst relief developed on the volcanic rocks of the  
Harghita Massif and Ciucuri Depression. Natura Geografie 14 no.5:35-  
39 S-O '62.

ILIE, M., geolog (Bucuresti)

Achievements in petrography and stratigraphy. Nautra  
Geografie 16 no. 4:21-28 Jl-Ag '64.

ILIE, MARIA

RUMANIA / Chemical Technology, Chemical Products and H  
Their Application, Part 3. - Pesticides.

Abs Jour: Ref Zhur-Khimiya, No 18, 1958, 62037.

Author : Sever Petrascu, Maria Ilie.

Inst : Not given.

Title : Study of Physical Properties of Mineral Powders  
as Insecticide and Fungicide Fillers.

Orig Pub: Studii si cercetaricchem., 1957, 5, No 3,  
389 - 394.

Abstract: The density, the volumetric weight, the porosity and the natural slope of fillers (bentonite, kaolin, diatomite, talc) were determined. The granulometric analyses were carried out with a microscope, as well as by elutriation and screening through standard screens.

Card 1/1

L 31365-66 RO

ACC NR: AP6021275

SOURCE CODE: RU/0003/65/016/001/0016/0018

AUTHOR: Ilie, Maria-Iliye, M.

ORG: none

TITLE: Determining the adherence of pesticide dusts

SOURCE: Revista de chimie, v. 16, no. 1, 1965, 16-18

TOPIC TAGS: pesticide, physical chemistry property

ABSTRACT: The author reports on a method of determining the adherence of the common Rumanian pesticide dusts of the talcum type, using an apparatus of the Goernitz-Zeumer type. Type A-II with an adherence of close to 50 percent was found to be a good standard. Series of determinations on different products show that the average error of the method is 10 percent. Orig. art. has: 2 figures, 4 formulas and 2 tables. [Based on authors' Eng. abstract] [JPRS]

27  
B

SUB CODE: 06, 07 / SUBM DATE: none / OTH REF: 005

UDC: 632.934;620.179.4

Card 1/1 JS

ILIE, Marin D.

Trade-union activity of the workers in a Romanian village. Munca  
sindic '7 no.10:35-37 0 '63.

1. Președintele Comitetului sindicatului salariatilor din comună  
Sadova, regiunea Oltenia.

ILIESCU, G. C. Prof. ; ILIE, N. Dr. ; PANTAZI, M. Dr.

Total atrio-ventricular block with periods of ventricular fibrillation.  
Med. int., Bucur. 9 no. 5:737-739 May 57.

1. Lucrare efectuata in Clinica medicala a Spitalului Bernath Andrei Bucuresti (director: prof. C. C. Iliescu)  
(HEART BLOCK, complications  
ventric. fibrillation, in total auric.-ventric. block)  
(VENTRICULAR FIBRILLATION  
periods, in total auric.-ventric. block)

BUSNITA, Th.; PRUNESCU-ARION, Elena; BREZEANU, Gh.; ZAMFIR, V.; BALDAC,  
Margareta; ILIE, Maria

Hydrobiological and piscicultural study of ponds with river  
pumped water. Studii cerc biol anim 15 no.4:419-441 '63.

1. Membru corespondent al Academiei R.P.R. (for Busnita).

PETRASCU, S.; BALTAG, Margareta; ILIE, Maria

Physical and chemical aspects of the formulation of  
phytopharmaceutical products. Rev chimie Min petr 15  
no.2:91-100 F '64.

1. Academia R.P.R., Institutul de biologie "Tr. Savulescu",  
Laboratorul de insectofungicide si toxicologie.

ILIE, Maria

Determining the adherence of dust phytopharmaceutical  
preparations. Rec chimie Min petr 16 no.1:16-18 Ja '65.

ILIE, MIRCEA

Figuri de geologi romani; Gheorghe Munteanu Murgoci, Ludovic Mrazec, Ion Popescu-Voitesti.

Bucuresti, Romania, Editura Stiintifica, 1957. 179 p.

Monthly List of East European Accessions (EEAI) LC Vol. 8, no. 8, August, 1959

Uncl.

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